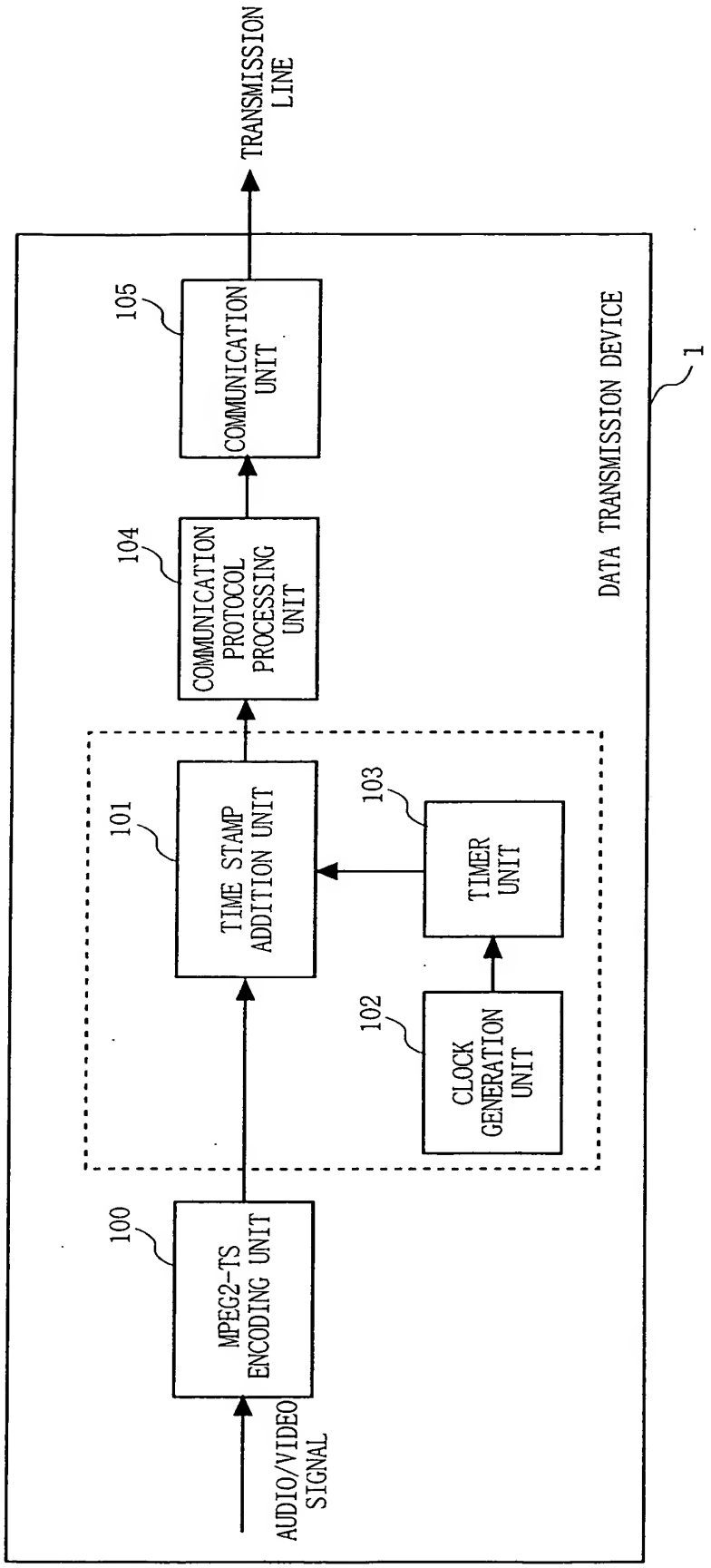
FIG. 1


TRANSMISSION LINE
DATA TRANSMISSION DEVICE
1
105
COMMUNICATION UNIT
104
COMMUNICATION PROTOCOL PROCESSING UNIT
101
TIME STAMP ADDITION UNIT
103
TIMER UNIT
102
CLOCK GENERATION UNIT
100
MPEG2-TS ENCODING UNIT
AUDIO/VIDEO SIGNAL

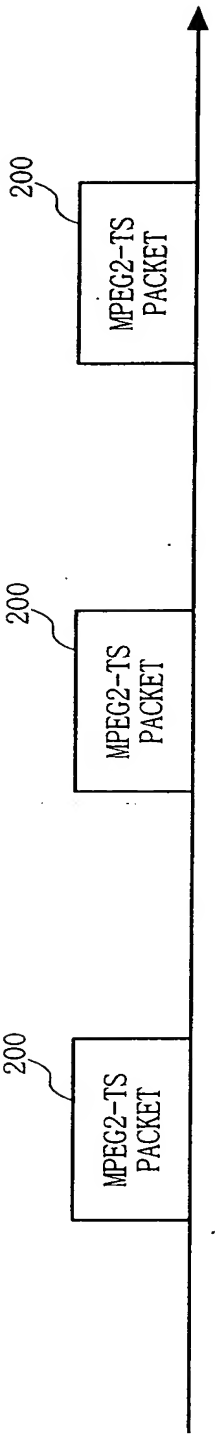


FIG. 2A

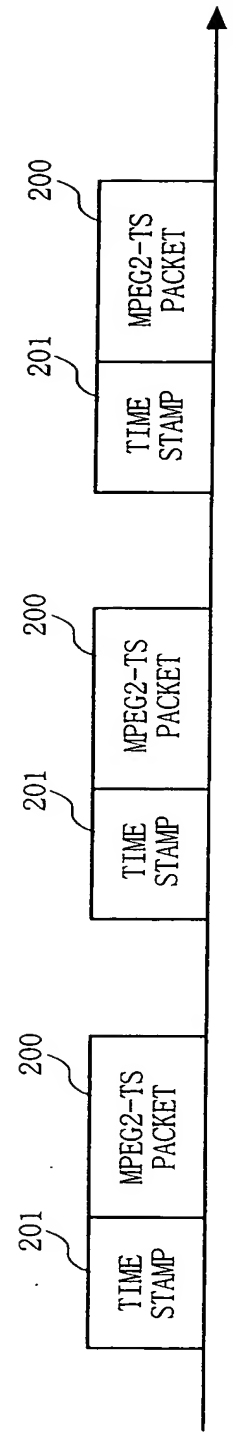

TIME STAMP
201
MPEG2-TS PACKET
200
TIME STAMP
201
MPEG2-TS PACKET
200
TIME STAMP
201
MPEG2-TS PACKET
200

FIG. 2B

FIG. 3

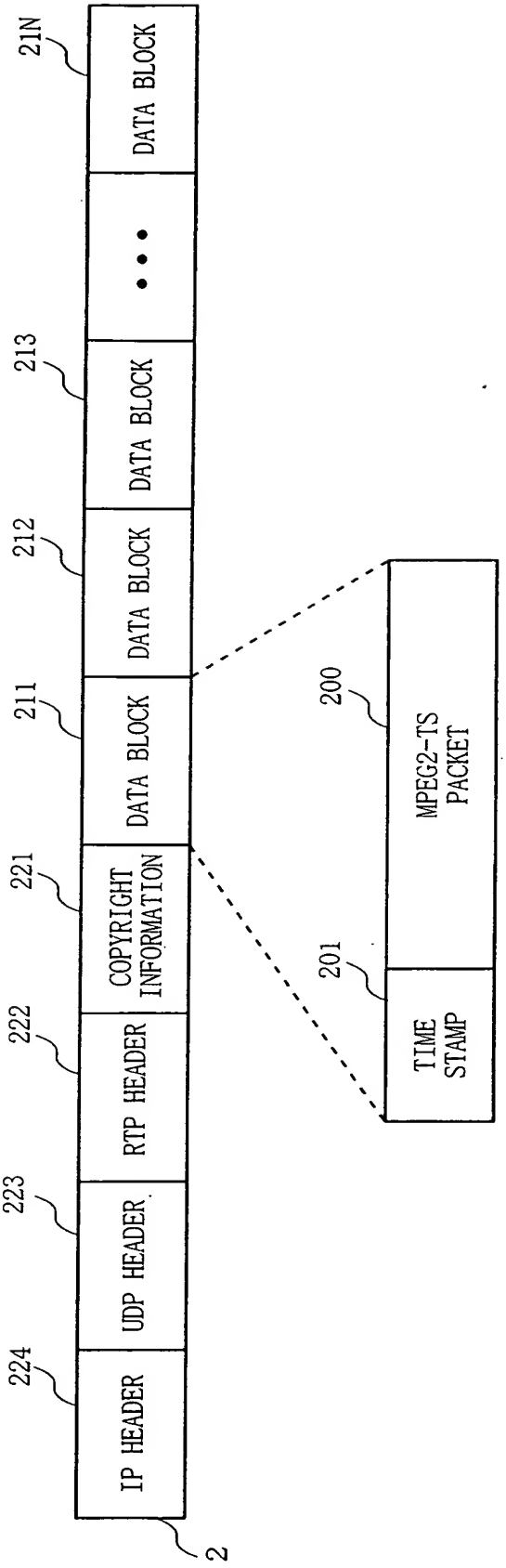

IP HEADER
UDP HEADER
RTP HEADER
COPYRIGHT INFORMATION
DATA BLOCK
DATA BLOCK
DATA BLOCK
• • •
DATA BLOCK
224
223
222
221
211
212
213
21N
2
TIME STAMP
MPEG2-TS PACKET
201
200

FIG. 4

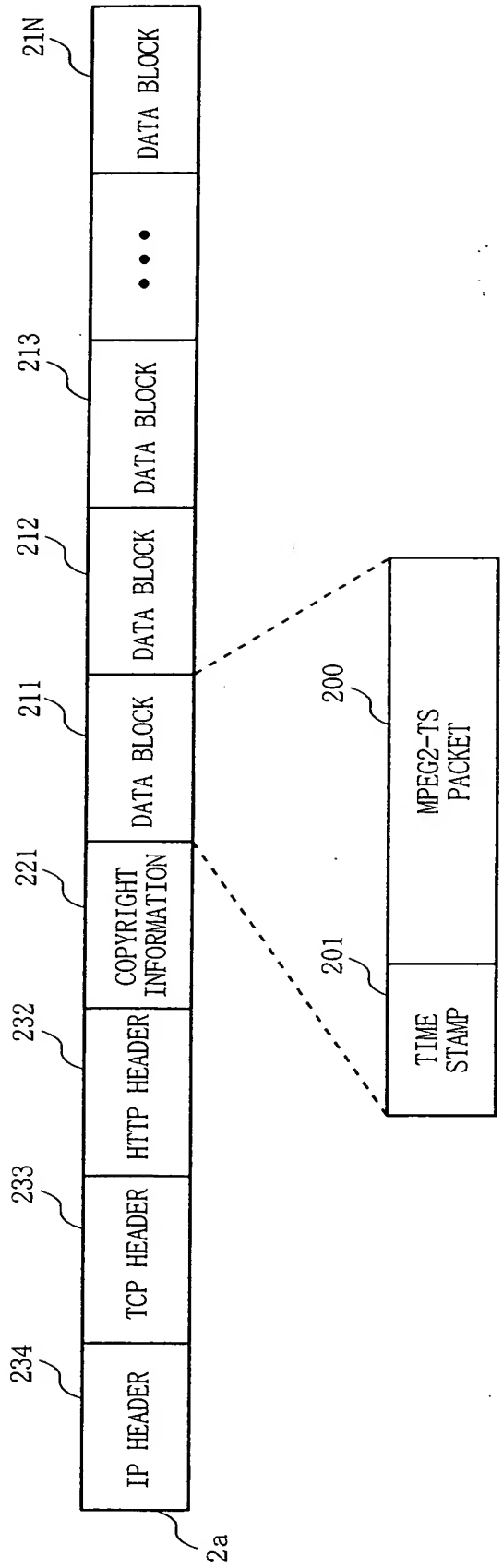

IP HEADER
TCP HEADER
HTTP HEADER
COPYRIGHT INFORMATION
DATA BLOCK
DATA BLOCK
DATA BLOCK
• • •
DATA BLOCK
234
233
232
221
211
212
213
21N
2a
TIME STAMP
MPEG2-TS PACKET
201
200

FIG. 5

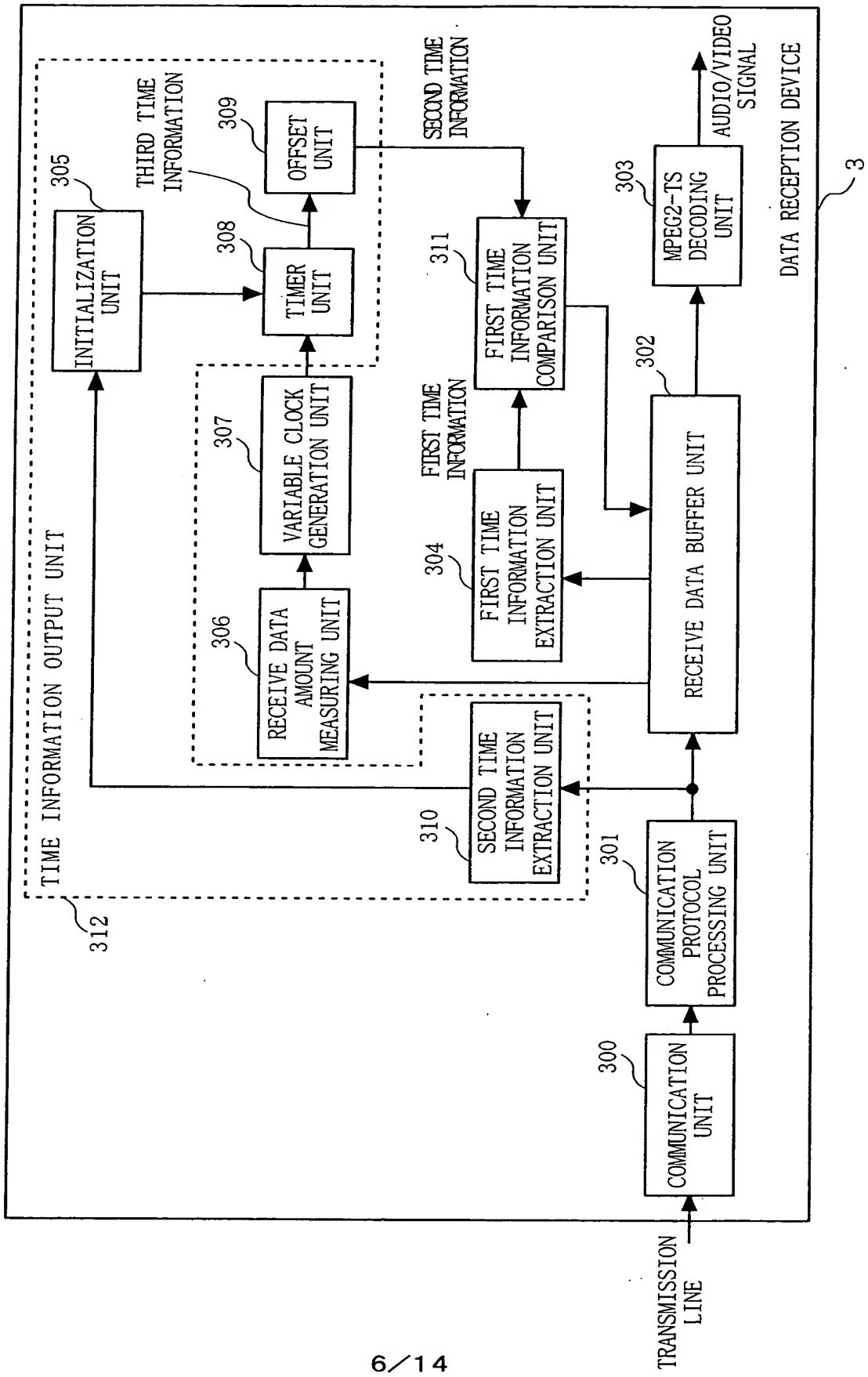

TRANSMISSION LINE
DATA RECEPTION DEVICE
3
COMMUNICATION UNIT
300
COMMUNICATION PROTOCOL PROCESSING UNIT
301
RECEIVE DATA BUFFER UNIT
302
MPEG2-TS DECODING UNIT
303
AUDIO/VIDEO SIGNAL
FIRST TIME INFORMATION EXTRACTION UNIT
304
FIRST TIME INFORMATION
FIRST TIME INFORMATION COMPARISON UNIT
311
SECOND TIME INFORMATION
OFFSET UNIT
309
THIRD TIME INFORMATION
TIMER UNIT
308
INITIALIZATION UNIT
305
TIME INFORMATION OUTPUT UNIT
312
VARIABLE CLOCK GENERATION UNIT
307
RECEIVE DATA AMOUNT MEASURING UNIT
306
SECOND TIME INFORMATION EXTRACTION UNIT
310

FIG. 6

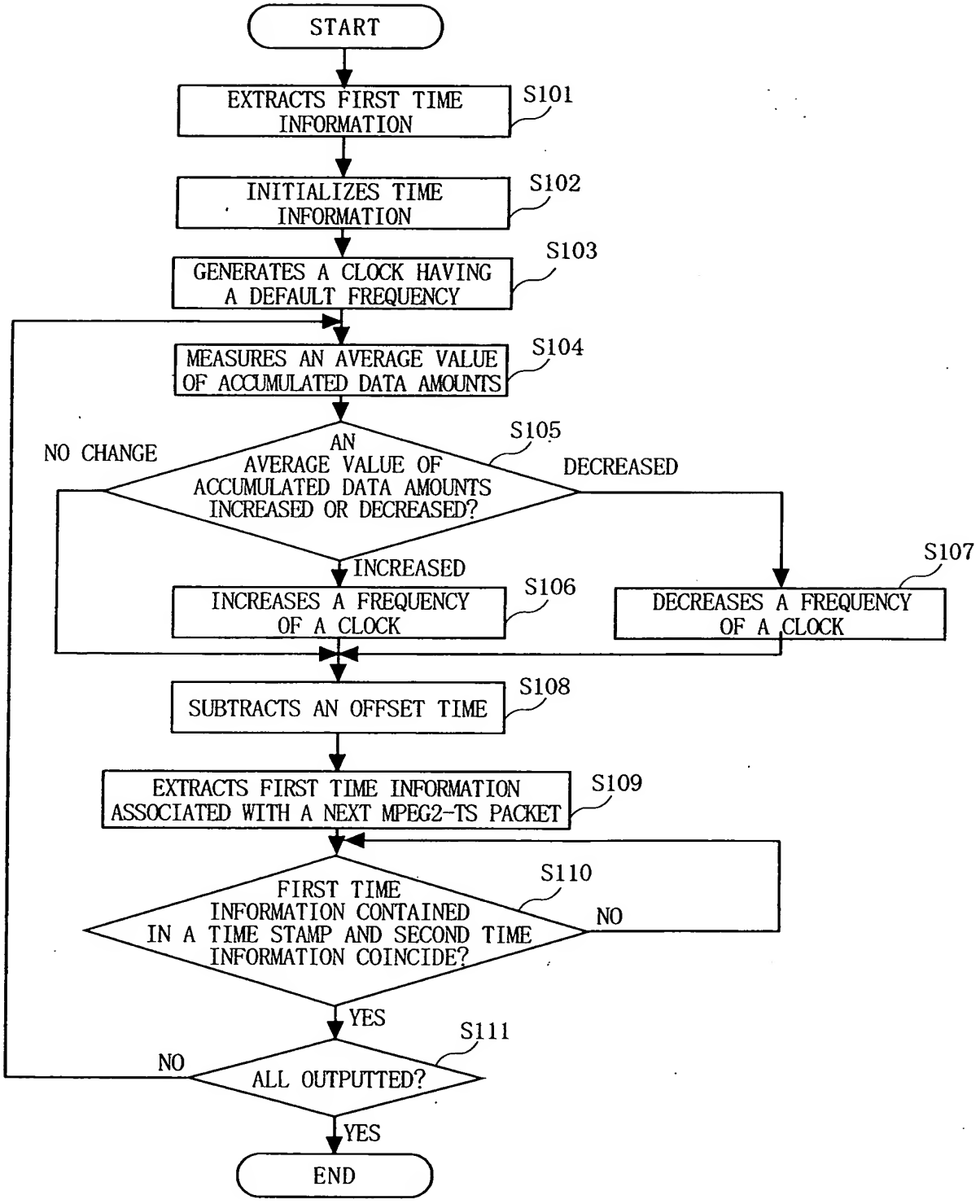

START
EXTRACTS FIRST TIME INFORMATION
S101
INITIALIZES TIME INFORMATION
S102
GENERATES A CLOCK HAVING A DEFAULT FREQUENCY
S103
MEASURES AN AVERAGE VALUE OF ACCUMULATED DATA AMOUNTS
S104
AN AVERAGE VALUE OF ACCUMULATED DATA AMOUNTS INCREASED OR DECREASED?
S105
NO CHANGE
DECREASED
INCREASED
INCREASES A FREQUENCY OF A CLOCK
S106
DECREASES A FREQUENCY OF A CLOCK
S107
SUBTRACTS AN OFFSET TIME
S108
EXTRACTS FIRST TIME INFORMATION ASSOCIATED WITH A NEXT MPEG2-TS PACKET
S109
FIRST TIME INFORMATION CONTAINED IN A TIME STAMP AND SECOND TIME INFORMATION COINCIDE?
S110
NO
YES
ALL OUTPUTTED?
S111
NO
YES
END

FIG. 7

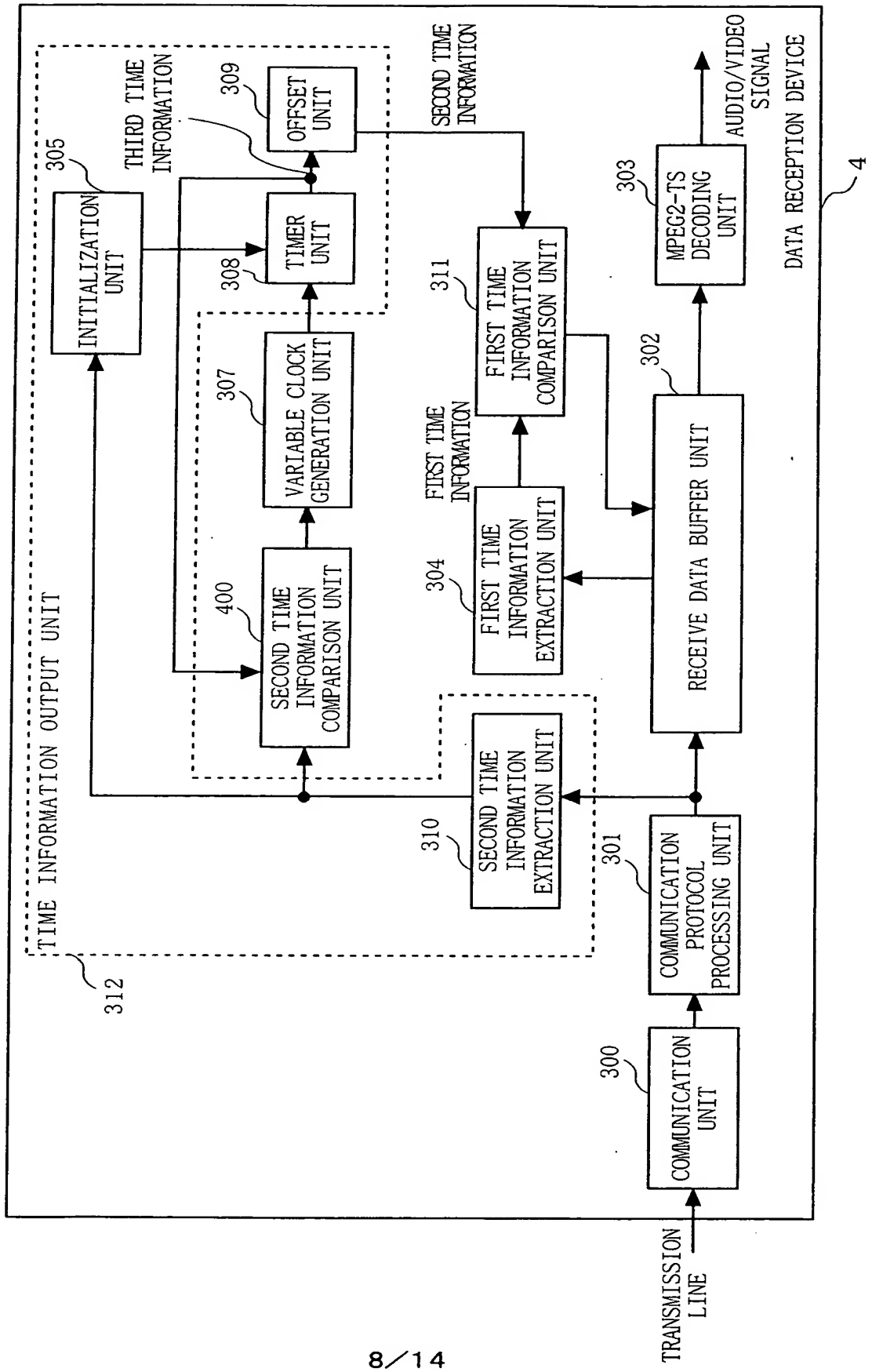

DATA RECEPTION DEVICE
4
TRANSMISSION LINE
COMMUNICATION UNIT
300
COMMUNICATION PROTOCOL PROCESSING UNIT
301
RECEIVE DATA BUFFER UNIT
302
MPEG2-TS DECODING UNIT
303
AUDIO/VIDEO SIGNAL
FIRST TIME INFORMATION EXTRACTION UNIT
304
FIRST TIME INFORMATION
FIRST TIME INFORMATION COMPARISON UNIT
311
SECOND TIME INFORMATION
SECOND TIME INFORMATION EXTRACTION UNIT
310
TIME INFORMATION OUTPUT UNIT
312
SECOND TIME INFORMATION COMPARISON UNIT
400
VARIABLE CLOCK GENERATION UNIT
307
TIMER UNIT
308
OFFSET UNIT
309
THIRD TIME INFORMATION
INITIALIZATION UNIT
305

FIG. 8

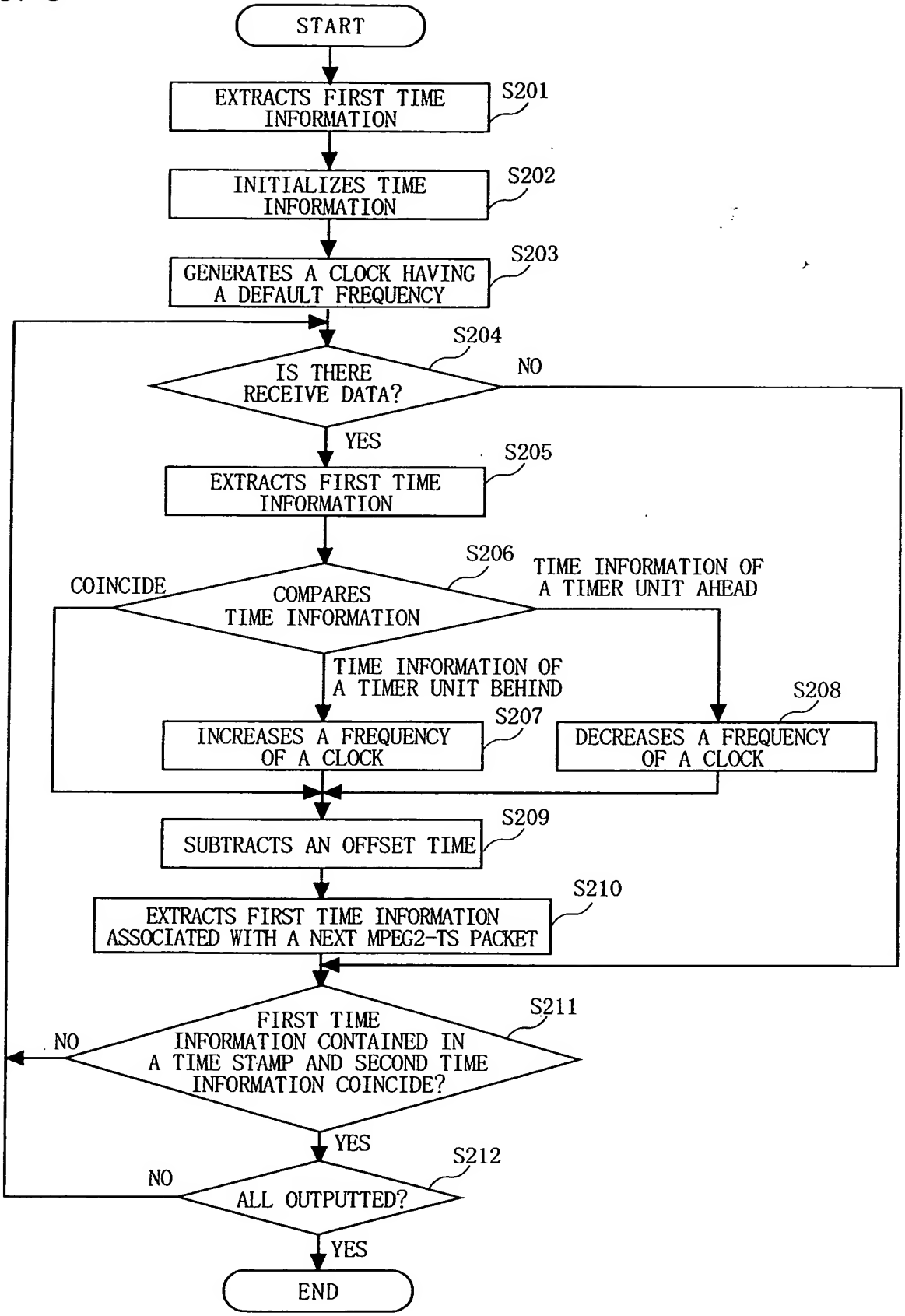

START
EXTRACTS FIRST TIME INFORMATION
S201
INITIALIZES TIME INFORMATION
S202
GENERATES A CLOCK HAVING A DEFAULT FREQUENCY
S203
S204
IS THERE RECEIVE DATA?
NO
YES
S205
EXTRACTS FIRST TIME INFORMATION
S206
COMPARES TIME INFORMATION
COINCIDE
TIME INFORMATION OF A TIMER UNIT AHEAD
TIME INFORMATION OF A TIMER UNIT BEHIND
S207
INCREASES A FREQUENCY OF A CLOCK
S208
DECREASES A FREQUENCY OF A CLOCK
S209
SUBTRACTS AN OFFSET TIME
S210
EXTRACTS FIRST TIME INFORMATION ASSOCIATED WITH A NEXT MPEG2-TS PACKET
S211
FIRST TIME INFORMATION CONTAINED IN A TIME STAMP AND SECOND TIME INFORMATION COINCIDE?
NO
YES
S212
NO
ALL OUTPUTTED?
YES
END

FIG. 9

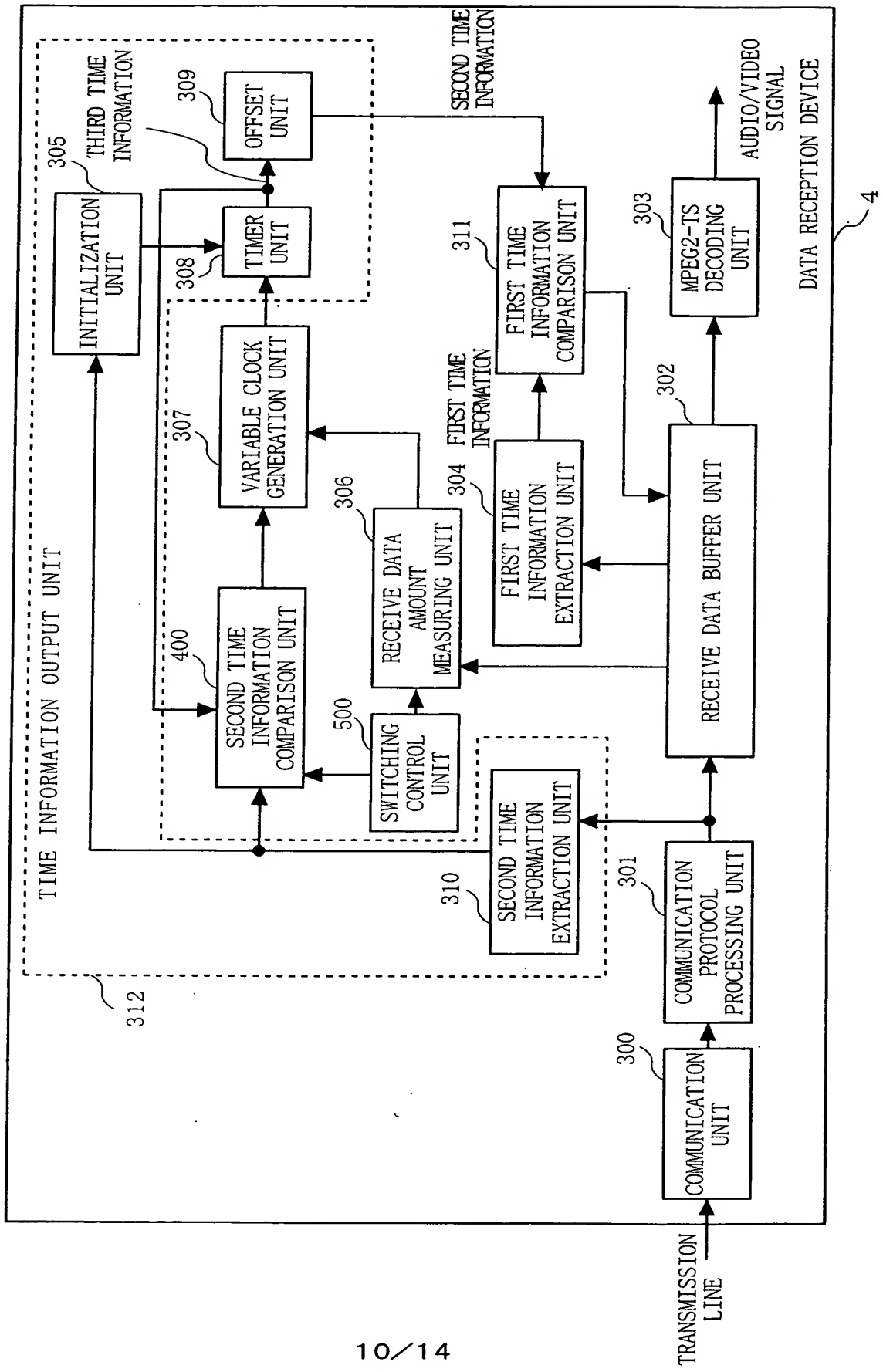

TRANSMISSION LINE
DATA RECEPTION DEVICE
4
TIME INFORMATION OUTPUT UNIT
312
COMMUNICATION UNIT
300
COMMUNICATION PROTOCOL PROCESSING UNIT
301
RECEIVE DATA BUFFER UNIT
302
MPEG2-TS DECODING UNIT
303
AUDIO/VIDEO SIGNAL
FIRST TIME INFORMATION EXTRACTION UNIT
304
FIRST TIME INFORMATION
FIRST TIME INFORMATION COMPARISON UNIT
311
SECOND TIME INFORMATION
RECEIVE DATA AMOUNT MEASURING UNIT
306
SECOND TIME INFORMATION EXTRACTION UNIT
310
SWITCHING CONTROL UNIT
500
SECOND TIME INFORMATION COMPARISON UNIT
400
VARIABLE CLOCK GENERATION UNIT
307
INITIALIZATION UNIT
305
THIRD TIME INFORMATION
TIMER UNIT
308
OFFSET UNIT
309

FIG. 10

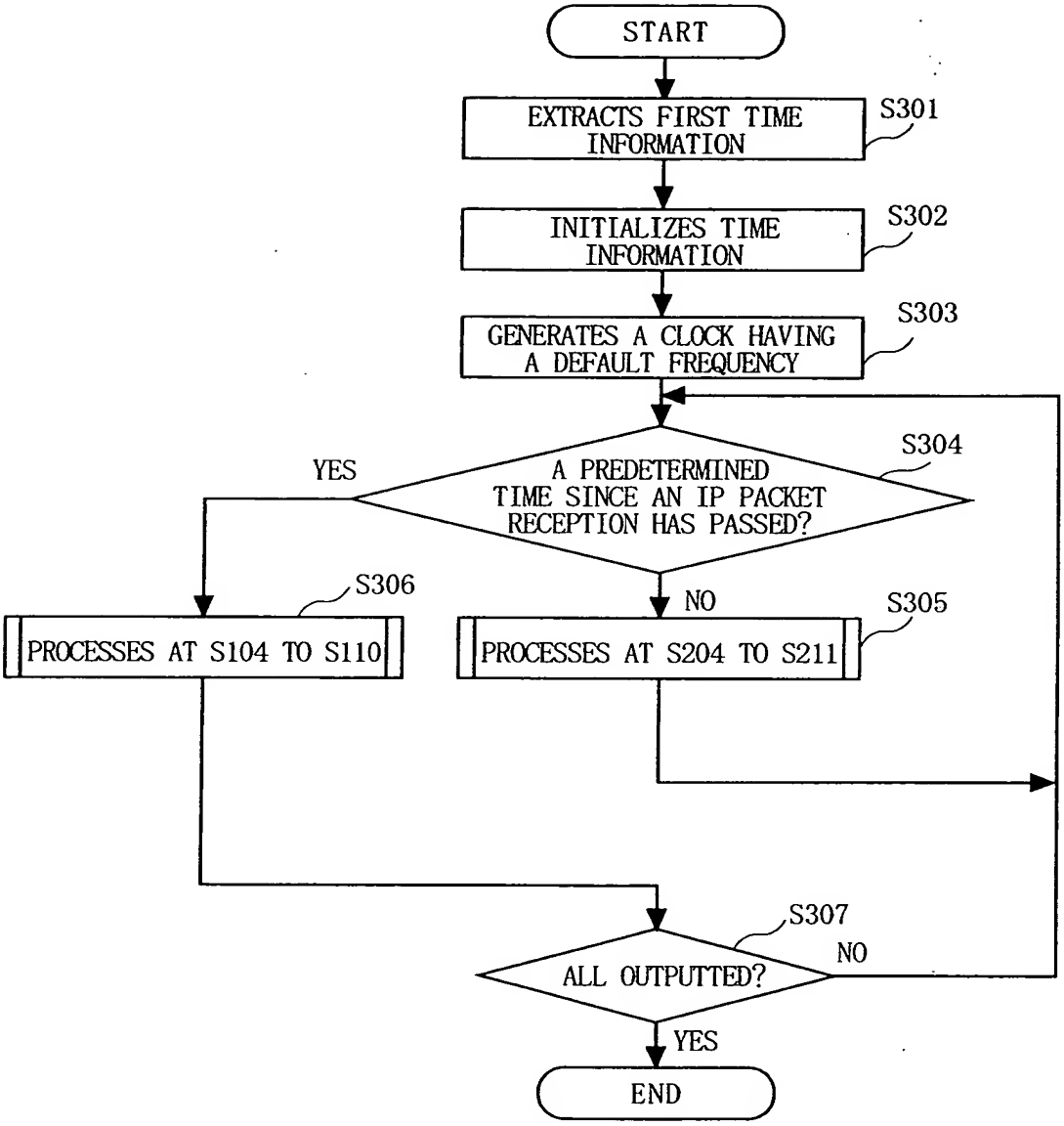

START
EXTRACTS FIRST TIME INFORMATION
S301
INITIALIZES TIME INFORMATION
S302
GENERATES A CLOCK HAVING A DEFAULT FREQUENCY
S303
A PREDETERMINED TIME SINCE AN IP PACKET RECEPTION HAS PASSED?
S304
YES
NO
PROCESSES AT S104 TO S110
S306
PROCESSES AT S204 TO S211
S305
ALL OUTPUTTED?
S307
NO
YES
END

FIG. 11

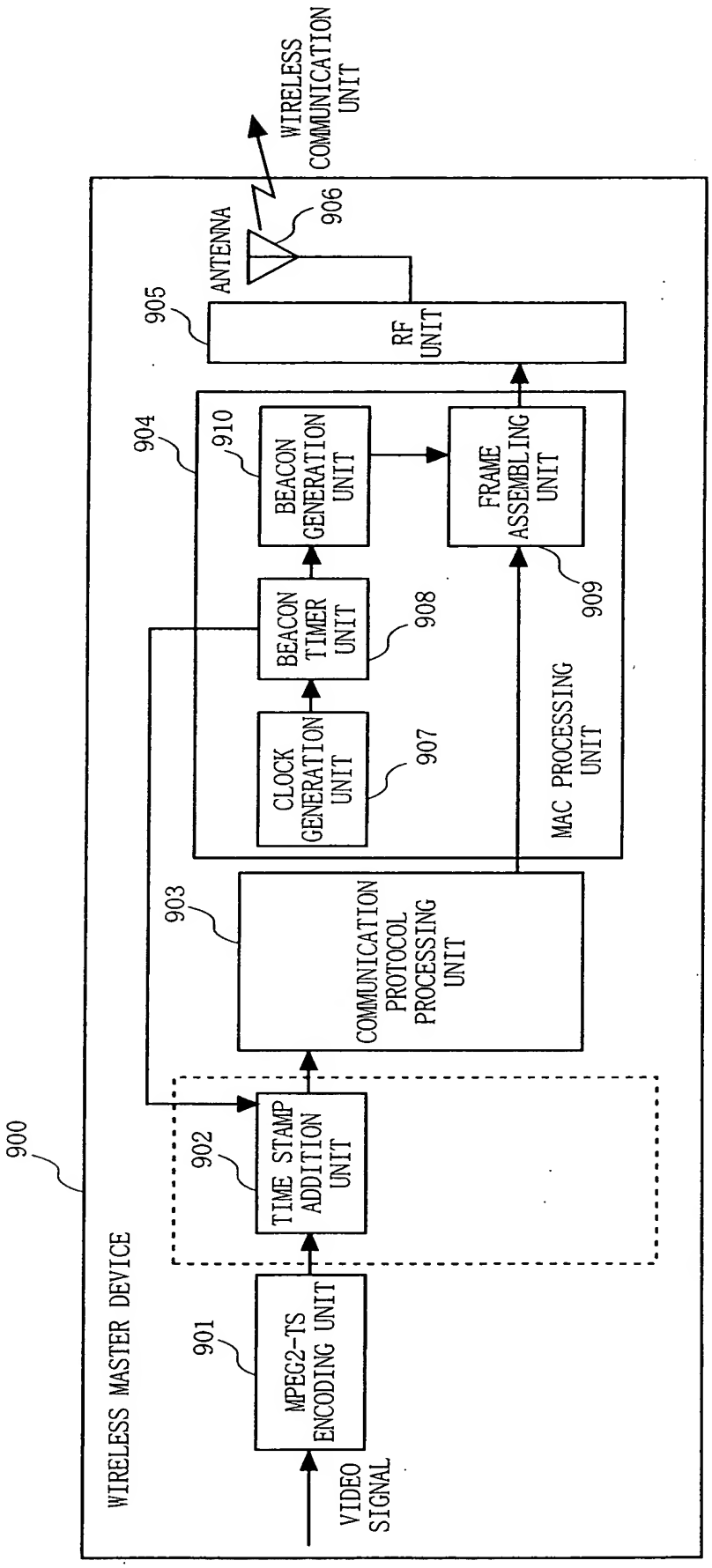

WIRELESS MASTER DEVICE
900
VIDEO SIGNAL
MPEG2-TS ENCODING UNIT
901
TIME STAMP ADDITION UNIT
902
COMMUNICATION PROTOCOL PROCESSING UNIT
903
MAC PROCESSING UNIT
904
CLOCK GENERATION UNIT
907
BEACON TIMER UNIT
908
BEACON GENERATION UNIT
910
FRAME ASSEMBLING UNIT
909
RF UNIT
905
ANTENNA
906
WIRELESS COMMUNICATION UNIT

FIG. 12

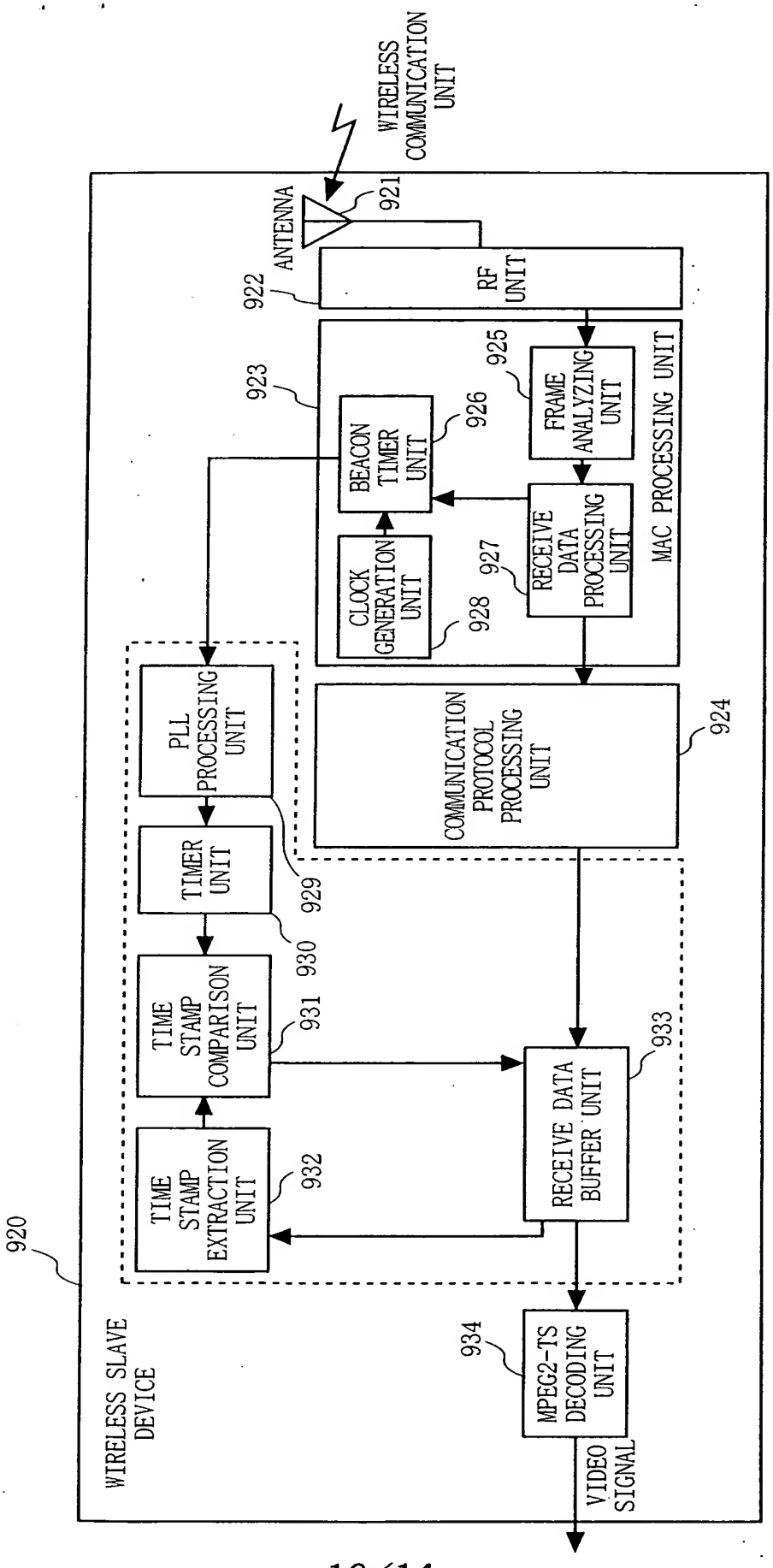
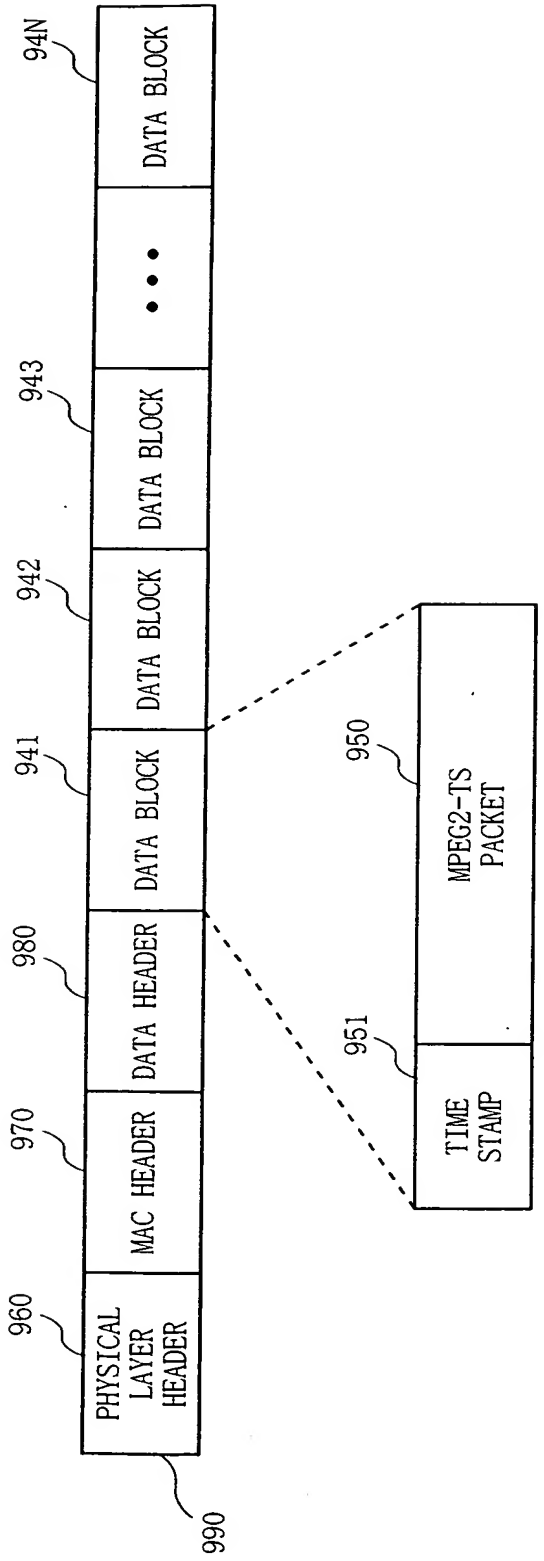

WIRELESS COMMUNICATION UNIT
ANTENNA
921
922
RF UNIT
923
925
FRAME ANALYZING UNIT
926
BEACON TIMER UNIT
927
RECEIVE DATA PROCESSING UNIT
928
CLOCK GENERATION UNIT
MAC PROCESSING UNIT
924
COMMUNICATION PROTOCOL PROCESSING UNIT
PLL PROCESSING UNIT
929
TIMER UNIT
930
TIME STAMP COMPARISON UNIT
931
TIME STAMP EXTRACTION UNIT
932
933
RECEIVE DATA BUFFER UNIT
934
MPEG2-TS DECODING UNIT
VIDEO SIGNAL
920
WIRELESS SLAVE DEVICE

FIG. 13


960
PHYSICAL LAYER HEADER
970
MAC HEADER
980
DATA HEADER
941
DATA BLOCK
942
DATA BLOCK
943
DATA BLOCK
• • •
94N
DATA BLOCK
990
950
MPEG2-TS PACKET
951
TIME STAMP